Bell & Howell *Guarantee*

1. This product is guaranteed against defects in materials and workmanship. During its lifetime, any servicing necessary because of imperfections in materials or workmanship will be done without charge (except for transportation of equipment) by Bell & Howell Company or any company-approved service station.

2. Equipment which has been damaged or abused, or worn from extended use will be repaired at factory established rates.

3. Bell & Howell lenses purchased with this equipment are covered by this guarantee. Lenses of other makes, projection lamps, and film are not covered by this guarantee.

4. No liability is assumed for film which is damaged or is unsatisfactory for any reason (due to equipment malfunction or otherwise) nor is Bell & Howell obligated to replace such film.

5. No liability is assumed for expenses or damages resulting from interruptions in operation of equipment.

6. This guarantee is void: (a) if adaptations or accessories of other than Bell & Howell recommendations have been made or attached; (b) if equipment has not been registered with Bell & Howell (use card supplied with equipment); (c) if equipment has been serviced by other than a Bell & Howell approved service station.

7. This guarantee is made in lieu of any other guarantee, warranty or liability, express or implied. It is valid only as to the initial purchaser of this new equipment, his donees or his bona fide vendees, upon receipt by Bell & Howell of a registration card or letter giving the name and address of the present owner of the equipment.

Bell & Howell Company

Form 15664 AOcee 2472 Printed in U.S.A.

how to make

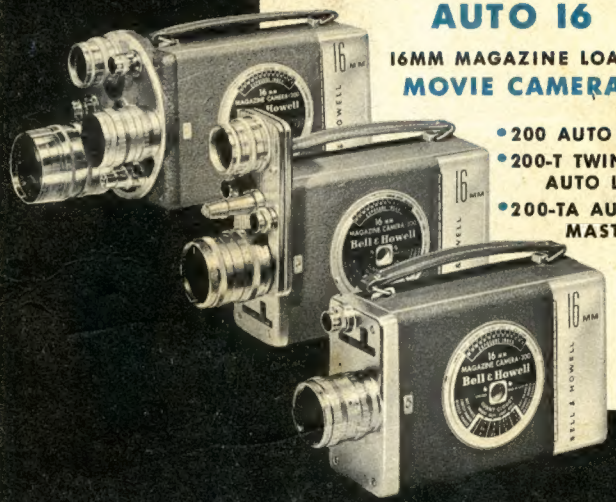
PERFECT MOVIES

with your new

Bell & Howell AUTO 16

16MM MAGAZINE LOAD MOVIE CAMERA

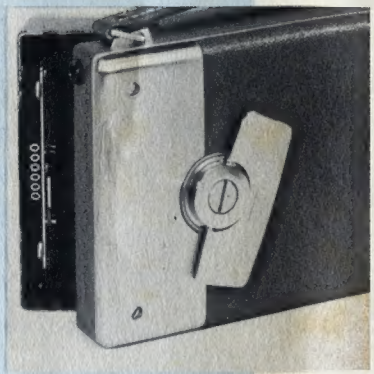
- 200 AUTO LOAD
- 200-T TWIN AUTO LOAD
- 200-TA AUTO MASTER



Use the stamped registration card on booklet cover to register your equipment with Bell & Howell. The serial number of your camera will be found on the inside of the film chamber door.

Registration of your equipment offers these advantages:

- Helps locate lost or stolen equipment.
- Puts you on our mailing list for interesting and informative literature.
- Free correspondence counsel from our Personal Service Department.
- Initiates the Bell & Howell Lifetime Guarantee. (it is *Void* unless your camera is registered with Bell & Howell.)

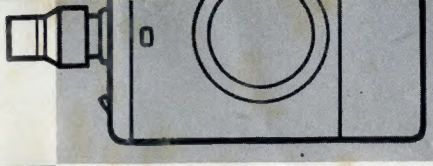


Bell & Howell Company

7100 McCORMICK ROAD, CHICAGO 45

NEW YORK 20 — **30 ROCKEFELLER PLAZA**

HOLLYWOOD 38 — **716 N. LA BREA AVE.**



...congratulations!

You have purchased a promise with your camera—a Bell & Howell promise of professional movies with amateur ease for years to come. Behind this promise and your camera stand years of Bell & Howell research and precision engineering. Since 1907 Bell & Howell craftsmen have been building Hollywood's preferred equipment; these same skilled artisans build Bell & Howell 8mm and 16mm cameras and projectors.

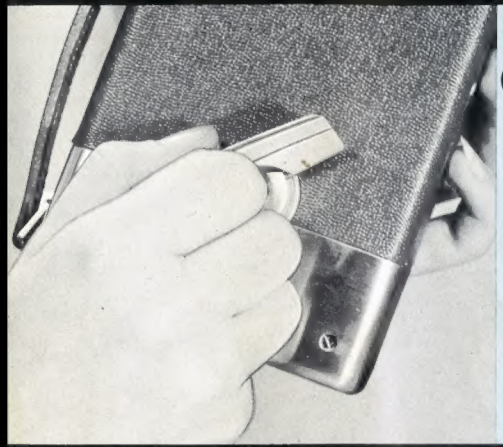
To be sure you get the best performance from your Bell & Howell, study the following pages carefully with your camera in front of you. Then, when you put your new camera to work, you'll get well-composed, sharp movies from your very first try.

The sharp, steady movies you get—in full natural color or sparkling black-and-white are proof of Bell & Howell superiority. Matched film registration mechanisms of B&H cameras and projectors and precision manufacturing from start to finished product give you perfect results over a lifetime.

Please feel free to call on your Bell & Howell dealer or write directly to us for further information. We promise to stand behind our products—your purchases—through the years to come.

BELL & HOWELL COMPANY

4 easy steps to good movies with your new Bell & Howell "200"



① WIND

Turn ratchet key in a back-and-forth motion until it stops.

② LOAD

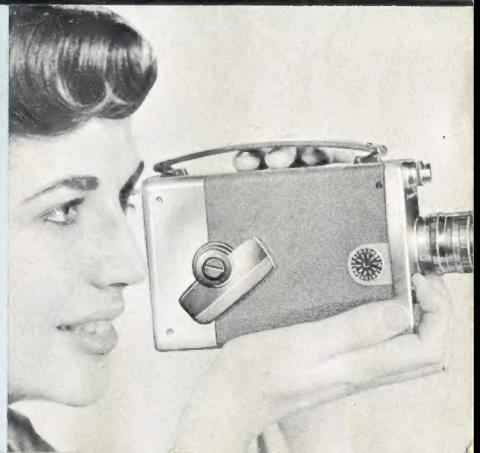
Open camera door. Insert film magazine. Close camera door.

③ SELECT and SET LENS OPENING AND CAMERA SPEED

Compute correct lens opening on built-in exposure guide. Turn lens ring to correct index mark. Set camera speed at 16.

④ SIGHT AND SHOOT

Put your eye to the viewfinder eyepiece. Locate the subject you want to film. Press finger down on the starting button.

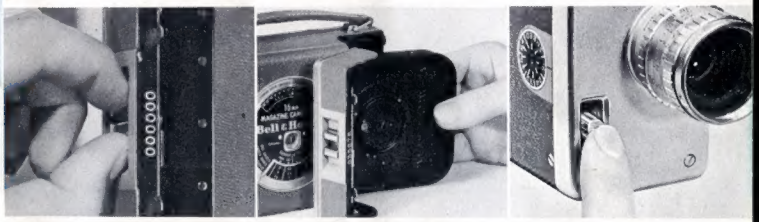


We've covered the basic operations of your Bell & Howell "200"...here are

detailed operating Instructions

loading...

Your Bell & Howell "200" uses any black-and-white or color 16mm magazine film. Consult your B&H dealer as to what type is best suited to your needs. The magazine load is quick and easy to use—eliminates threading of the camera, protects film from accidental exposure, and provides easy interchangeability of different types of film at any time. A safety feature of your "200" prevents operation unless the film chamber door is securely closed.



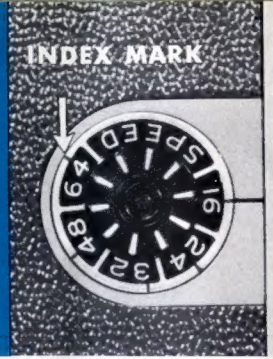
① ② ③

① Open camera door by pressing together two latch-bars at the rear of the camera. Door springs open automatically.

② Insert film magazine and push it firmly into place. You'll hear a "click" when it is correctly seated. Never force magazine in. Close camera door.

③ Press starting button upward two or three times to make sure that film is transporting smoothly.

selecting camera speed...



The camera speed dial indicates the number of frames (pictures) exposed per second. Each Bell & Howell camera is individually calibrated. An index mark in each dial segment indicates the correct setting point for every speed.

- **16 frames per second** is used generally for normal silent movies. You will use this speed most of the time.
- **24 frames per second** slows down the rate of action to two-thirds normal speed, and must be used when film is to be synchronized with sound.
- **32 and 48 frames per second** slows down the rate of action to one-half or one-third normal speed. Use it to film fast-moving sporting events, panoraming, and for scenes taken from a moving train or automobile.
- **64 frames per second** is true slow-motion. Use it to film fast-moving subjects when you want to record them in slow-motion—one-quarter their actual speed.

3-way starting button

Pressing your index finger down on the starting button causes the camera to run continuously until you release the button or the spring motor reaches the end of its run. The camera stops automatically before the spring motor slows down, preventing inaccurate exposure.

When you push the starting button up on your "200" you take a single picture at a time. Use single frame exposure *only* for animation work—when the position of the subject changes slightly over a period of time and you want to film this action at time intervals. When such a series of single pictures is shown on the screen, the subject will appear to move.

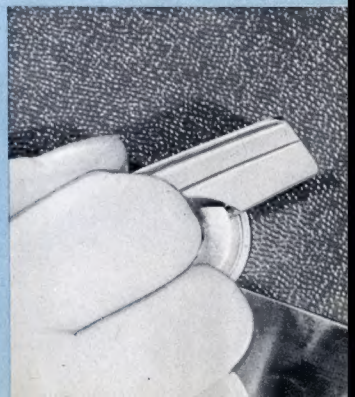
Set speed dial at 16 frames per second and close the lens diaphragm one-half stop more than normal f/setting for best results when you use single frame exposure. You must use a tripod for this kind of work.

Exerting a little extra pressure down on the starting button locks the camera in running position, allows you to take movies of yourself. When using the continuous run lock, the camera should be mounted on a tripod.

After a full 12½ feet of film is run off, the automatic rundown stop on your Bell & Howell "200" stops the filming action.

Ratchet-Type Winding Key on the "200"

Just like winding a watch. The ratchet key on the "200" winds faster and easier than most other types of winding mechanisms. Holding the "200" in your left hand, grasp the key in your right hand. Now, holding the key firmly, swing the camera in a half-turn backward and forward, repeating this motion until the spring motor is completely wound. Each spring wind runs off 12½ feet of film; however, it is not wise to let the motor run down completely. Rewind your camera after filming each scene.



how to use the *built-in exposure-guide* on your camera

Computing correct lens opening is convenient and quick when you use the new Bell & Howell built-in exposure guide. There is only one dial to set and it covers all outdoor filming conditions and all types of film.

To compute correct lens opening, set index mark for camera speed opposite index mark for ASA film speed. The ASA film speed for the type of film you are using is marked on the film package.

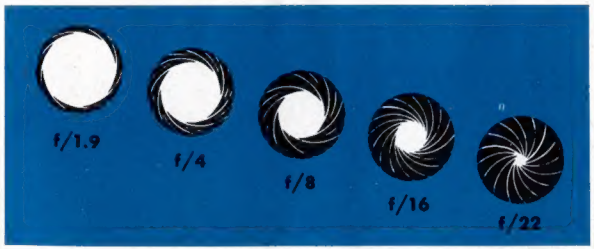
Determine the prevailing light conditions of the day—sunny, cloudy-bright, hazy-light, dull. Then decide what type of subject you are filming—not shaded, lightly shaded or heavily shaded.

Trace arrow for determined light conditions down to parallel type of subject. The reading where the two meet is your correct lens opening.

Let's try a sample computation just to make sure we have everything straight. Our camera speed is 16 f.p.s.; film speed for daylight Kodachrome, ASA 10; light conditions, sunny-hazy; type of subject, not shaded. What lens opening did you get? f/5.6? That's right! Computing lens opening will be "second nature" to you after a little practice. Now we can set the lens.

setting the *lens opening*...

The amount of light passed by the lens to the film is controlled by lens opening. Take a look at the lens on your Bell & Howell "200." As the f/stop increases numerically, the lens opening decreases in size. For example, if you have a standard 1" f/1.9 lens, the f/stops will be 1.9, 2, 2.8, 4, 5.6, 8, 11, 16 and 22. The lens

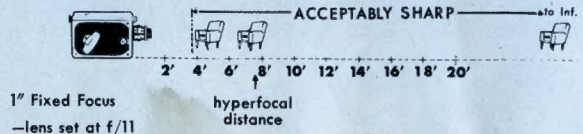


set at f/1.9 admits the maximum amount of light to the film. Lens setting f/22 admits the least amount of light to the film.

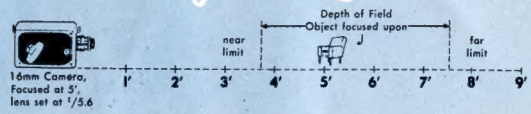
In order to set the lens opening on your camera, rotate the lens diaphragm control ring as shown to the correct index mark.

using the "200" f/2.5 fixed focus lens

This type of lens requires no adjustment for photographing subjects at varying distances from the camera. Bell & Howell fixed focus lenses are pre-set at the point of critical focus for the particular lens at its widest opening. This point of critical focus is known as the hyperfocal distance. It changes as you change lens openings. At f/11 the point of critical focus is 7′6″. Any subject from half this distance (3′9″) to infinity will be acceptably sharp, while the point of critical sharpness will be the actual hyperfocal distance (7′6″). See the table of hyperfocal distances on page 25 and use it as a reference guide to insure sharp movies.



using the focusing mount lens



This type of lens is desirable particularly for photographing subjects at very short distances even at the largest lens openings. The focusing ring on this type of lens is calibrated in feet.

To use the focusing mount lens, first set the correct lens opening (f/stop). Then turn the front lens collar until the figure corresponding to the distance between the camera and subject is at the index mark. A depth of field table on page 24 shows the nearest and most distant point of sharpness for different combinations of lens openings and footage settings.

A focusing mount lens may be used as a fixed focus lens when a number of subjects must be filmed so rapidly that the interval between scenes is not sufficient for changing the focus setting or when time does not permit accurate judgment of distance. An ice show or football game are good examples in this case. Set the lens at its hyperfocal distance as given in our chart on page 25. Then all objects from half the hyperfocal distance to infinity will be sharp.

Swiftturn turret on the 200-T Twin Auto Load

To switch lenses and objectives, grasp the turret post between thumb and finger and pull it forward. Rotate the turret a half-turn and drop it into place over the two guide pins on the front panel of the camera.

3-lens turret on the 200-TA Auto Master

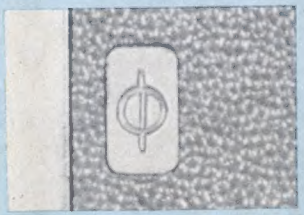
Apply slight pressure to the turret, rotating desired lens and objective into position. The lens and objective of your choice will automatically click into position.

turret conversions make your Auto 16 more versatile

As your movie-making experience broadens, the chances are that you'll want to add accessory lenses to your movie equipment. (see pages 24-25). If and when you do, you'll appreciate the convenience and fast lens change a turret affords.

Like all Bell & Howell equipment, your Auto 16 is designed to grow with you. If you want to add a two- or three-lens turret to your 200 Auto Load, or a three-lens turret to your 200-T Twin Auto Load, just bring your camera into your local B & H dealer. He'll be glad to arrange a factory conversion for you.

film reference mark...

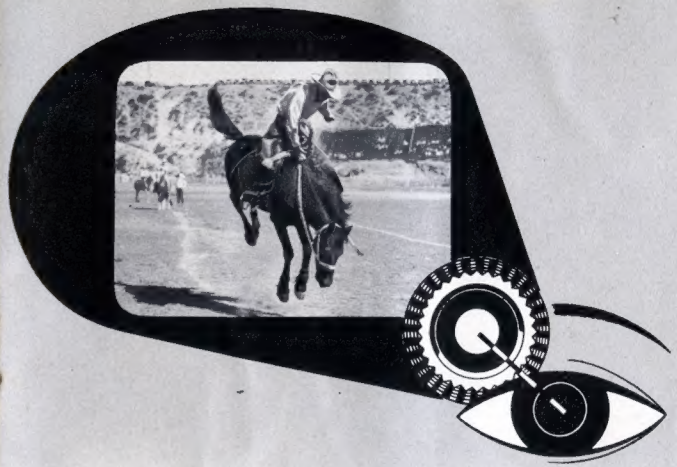


Turn your "200" over on its side with the built-in exposure calculator facing up. Do you see a small circle broken by a straight line near the front of your camera? That is the film reference mark. It indicates the exact position of the film inside the camera. This unimportant looking little mark becomes a very decisive instrument when you're filming with a focusing mount lens. It acts as a gauge for measuring the exact distance from film to subject—especially important when taking close-ups.

holding the camera

Hold your camera in a vertical, never a horizontal position when filming, unless you want an unusual effect. Raise camera and sight through the viewfinder eyepiece as shown in illustration. Whatever holding method yields the greatest camera steadiness is the one for you to use. The carrying strap on the top of your camera can act as a guide for your hand while filming.

Keep hands and fingers away from lens opening. Brace elbows against side of body and rest camera firmly against cheek. Whenever possible, use a tripod for maximum camera steadiness.



sighting through the viewfinder

Put your eye to the viewfinder eyepiece. You see exactly as much of your subject as will appear on the screen, in the same proportion as the lens "sees" it. The positive viewfinder system on your "200"—an exclusive Bell & Howell feature—makes this possible. It also eliminates shifting of the image when your eye moves at the eyepiece. You always "get what you see" with the B&H positive viewfinder.

When you rotate the turret on the "200-T" or "200-TA," a matching viewfinder objective automatically positions with the lens of your choice, whether it be a standard, wide-angle or telephoto lens.

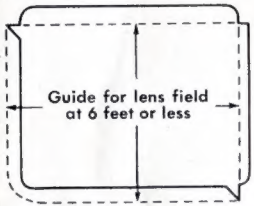
correcting for parallax

When taking close-ups, allowance must be made for the fact that the viewfinder on the 200 camera is 1½ inches above and ⅝ inch to the left of the lens.

When filming a subject six feet or more from the camera this difference is negligible.

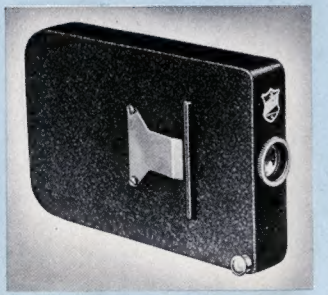
To compensate for parallax when filming a subject 6 feet or less from the camera, the two notches you see in the viewfinder are used as a guide.

Imagine a line drawn from the top notch to the bottom notch of viewfinder, following curve of the frame. This imaginary line indicates the relative position of the filming area at less than six feet.



Bell & Howell Direct focuser

For exact parallax correction at less than six feet, use a Bell & Howell Direct Focuser.



Bell & Howell Direct Focuser fits into magazine chamber of the camera, allows photographer to frame and focus through the lens.

let's make movies!

Your movies should tell a story—a story with continuity and interest. Don't make a haphazard collection of pictures with little association.

In order to film a connected, smooth-running story, take at the very least three feet of film on a run. A simple gauge for running the minimum three feet is to count slowly to fifteen as you film a particular scene at 16 frames per second. For greater accuracy, check the film footage window in the center of the exposure guide.

Length of scene should be governed mainly by the subject's action—fast-moving subjects for a longer period of time, landscapes and slow-moving subjects for a shorter period of time.

outdoor pictures—panning

In order to show the relationship between two objects, it is desirable at times to "pan"—that is, to move the camera horizontally while the exposure is being made.

Set camera at 32 frames per second to smooth out motion. Start "panning" with an object of lesser importance; then swing *slowly* to the most important object. Hold camera steadily on the first view, pivot *slowly* from the waist to left or right; then hold it on the last view before stopping the exposure. Never panoram on close-up objects; you'll get a blur. When "panning" to follow a moving subject, keep it centered in the viewfinder.

"Pan" only when absolutely necessary. Most of the time you'll get better results by holding the camera still, taking a series of steady shots to tell the story.

taking movies *indoors*

For most indoor movies, the use of at least two floodlights is recommended. One light should be about the same height from the floor as the face of the subject and near the camera. The second light should be raised about two feet higher and at a 45° angle from the camera.

For indoor color photography, use Type-A Kodachrome film. The entire scene should be illuminated as uniformly as possible.

Set your camera in place before lights are positioned. Be sure that no light strikes the camera lens. The distance from camera to subject can be varied without changing the camera lens opening provided the distance from subject to lights is not changed.

In all cases, use an exposure meter or an exposure guide when filming indoors. With an exposure meter, check carefully from different points around the subject in order to reach a good average light reading.

keep your camera *clean*

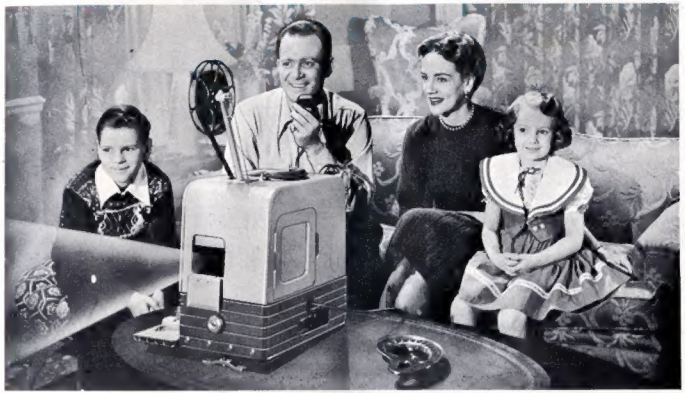
To clean the camera interior, open camera door, remove dirt collected around photographic aperture with a camel's-hair brush. *Never use sharp tools.* Dislodge hardened dirt with a swab of lens cleaning tissue moistened with a *little* alcohol. Brush out film chamber.

To clean the lens, unscrew it and remove from camera. *Do not take it apart.* Clean exposed lens surfaces with B&H Lens Cleaning Tissue moistened with a little B&H Opti-Kleen lens cleaning fluid.

Clean viewfinder eyepiece and filters with the same materials as the lens.

Your camera is lubricated for one year's use when it leaves the factory. Keep it in good working condition by returning it annually to the B&H factory, branch office, your B&H dealer or Approved Service Station for complete servicing.

now you can make your own sound movies



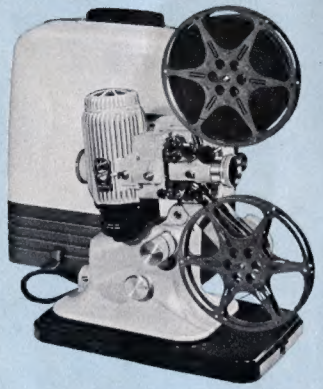
Here is the greatest development since "talkies" . . . the Filmosound 202 . . . the 16mm projector that records sound on your films as you project them . . . then plays back your own sound movie immediately. It's easy to make your own sound movies right in your own home.

Now all the movies you shoot with your Auto 16 can be sound movies . . . and you can add sound to your old 16mm silent films. Ask your dealer about the Filmosound 202.

Filmosound 202

magnetic recording projector

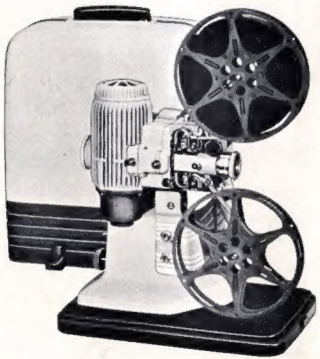
- 2000-foot capacity . . . full hour show
- reverse and still picture projection
- project silent, optical or magnetic sound films
- 1,000-Watt concentrated filament lamp



Bell & Howell *Diplomat*

16mm silent projector

The finest 16mm silent projector made. Full 400-foot capacity lets you enjoy a quarter hour show of your movies at their best. Smooth, dependable all-gear drive. Reverse and still picture projection.



Bell & Howell *Statesman*

16mm silent projector

An economical projector that offers you flicker-free movies, brighter and larger than life. Easy to thread and operate, the Statesman fully protects your valuable film, brings you many advanced features. Reverse and still picture projection.

carrying cases for your *Auto 16*

For the protection of your camera . . . Bell & Howell designs and produces its own carrying case of fine, top grain cowhide leather. You can choose from two distinctive styles for your new camera.

Sheath Case—Molded to fit the B & H "200" perfectly. Designed with a handy shoulder strap and dependable lock. A carrying case that you'll be proud to carry—that will give you years of hard wear.

Combination Case—Accommodates the "200" "200-T" or "200-TA". Case also has room for two extra film magazines, extra lenses and an exposure meter. Beautifully constructed for long wear.

Shutter Speed Comparison Chart

The following table gives the corresponding still camera shutter speed for each of the frame speeds of the Bell & Howell "200", "200-T" and "200-TA."

Camera Speeds	Shutter Speeds
16 f.p.s.	1/43 second
24 f.p.s.	1/65 second
32 f.p.s.	1/86 second
48 f.p.s.	1/129 second
64 f.p.s.	1/172 second
Single Frame	1/40 second

lenses...

The standard "C" mount lens on your "200" is easily interchangeable. Telephoto lenses are available for taking close-ups of distant subjects; wide-angle lenses for covering large areas, and speed lenses for filming under poor lighting conditions. All Bell & Howell lenses and Taylor Hobson Cooke lenses are fully color-corrected and Filmocoted for maximum light transmission and protection of exposed glass surfaces.

A Wide-Angle Lens will film a greater area of the subject than your standard camera lens from the same distance. This type of lens is most useful in cramped quarters, where you have to film close-up.
Choose the B&H 0.7″ f/2.5 Super Comat for this job.

A Telephoto Lens brings the subject close-up and magnifies the image you are filming. Particularly useful when photographing a candid subject. Choose from among these B&H and Taylor Hobson Cooke telephoto lenses.

2″ f/1.4 TTH Ivotal (2x magnification)
2″ f/3.5 TTH Kinic (2x magnification)
2″ f/3.5 B&H Telate (2x magnification)
2.8″ f/2.5 TTH Panchrotal (2.8x magnification)
3″ f/2.5 Angenieux (3x magnification)
4″ f/4.5 B&H Telate (4x magnification)
6″ f/4.5 B&H Telate (6x magnification)

Speed Lenses are used for photographing subjects under poor lighting conditions. These "fast" lenses help you to capture pictures which, if you were using your ordinary lens, would result in blank or badly underexposed film.

1″ f/1.4 TTH Ivotal
1″ f/1.9 (T 2.1) Super Comat
2″ f/1.4 (T 1.6) TTH Ivotal (Speed-telephoto, 2x magnification)
2.8″ f/2.3 (T 2.5) Cooke Panchrotal (Speed-telephoto, 2x magnification)

DEPTH OF FIELD TABLE FOR 16MM CAMERAS

with 1-inch lens in focusing mount

Object Area Ht.	Object Area Wd.	Best Focus	Far Depth Near	Far Limit, Depth of Field, Near Limit, and Limiting f/numbers f/1.4	f/2	f/2.8	f/4	f/5.6	f/8	f/11	f/16	f/22	f/32
(16°)	(21°)	∞	N	60′	42′	30′	21′	15′	10′ 5″	7′ 5″	5′ 2″	3′ 9″	2′ 7″
5′ 7″	7′ 5″	20′	F	30′	38′	60′	420′	∞	∞	∞	∞	∞	∞
			D	15′	24′	48′	410′						
			N	15′	14′	12′	10′ 3″	8′ 7″	6′11″	5′ 6″	4′ 2″	3′ 2″	2′ 4″
2′ 9″	3′ 8″	10′	F	12′	13′	15′	19′	30′	276′	∞	∞	∞	∞
			D	3′ 5″	4′11″	7′ 6″	12′ 3″	24′	271′				
			N	8′ 7″	8′ 1″	7′ 6″	6′ 9″	6′	5′ 1″	4′ 4″	3′ 5″	3′ 9″	2′ 1″
1′ 11″	2′ 7″	7′	F	7′11″	8′ 5″	9′ 2″	10′ 6″	13′	21′	92′	∞	∞	∞
			D	1′ 8″	2′ 5″	3′ 5″	5′ 3″	8′ 3″	17′	89′			
			N	6′ 3″	6′	5′ 9″	5′ 3″	4′ 9″	4′ 2″	3′ 8″	3′	2′ 6″	1′11″
1′ 4″	1′ 10″	5′	F	5′ 6″	5′ 8″	6′	6′ 7″	7′ 6″	9′ 7″	14′	16′	∞	∞
			D	11″	1′ 2″	1′ 9″	2′ 7″	3′ 9″	6′ 2″	11′	13′		
			N	4′ 7″	4′ 6″	4′ 3″	4′	3′ 9″	3′ 5″	3′	2′ 7″	2′ 2″	1′ 9″
1′ 1″	1′ 5″	4′	F	4′ 4″	4′ 5″	4′ 7″	4′11″	5′ 6″	6′ 6″	8′ 6″	17′	∞	∞
			D	7″	9″	1′ 1″	1′ 7″	2′ 4″	3′ 7″	5′11″	15′		
			N	3′ 9″	3′ 8″	3′ 6″	3′ 4″	3′ 2″	2′11″	2′ 7″	2′ 3″	1′11″	1′ 7″
11″	1′ 3″	3′ 6″	F	3′ 9″	3′10″	4′	4′ 3″	4′ 7″	5′ 3″	6′ 6″	10′ 8″	46′	∞
			D	5″	7″	10″	1′ 3″	1′ 9″	2′ 8″	4′ 1″	8′ 7″	44′	
			N	3′ 4″	3′ 3″	3′ 2″	3′	2′10″	2′ 7″	2′ 5″	2′ 1″	1′10″	1′ 6″
10″	1′ 1″	3′	F	3′ 2″	3′ 3″	3′ 4″	3′ 6″	3′ 9″	4′ 3″	5′	7′ 1″	14′ 5″	∞
			D	4″	5″	7″	10″	1′ 3″	1′11″	2′10″	5′ 2″	13′	
			N	2′10″	2′10″	2′ 9″	2′ 8″	2′ 6″	2′ 4″	2′ 2″	1′11″	1′ 8″	1′ 5″
8″	11″	2′ 8″	F	2′ 9″	2′10″	2′11″	3′ 1″	3′ 3″	3′ 7″	4′ 1″	5′ 6″	9′	∞
			D	2″	4″	6″	9″	1′	1′ 5″	2′ 1″	3′ 9″	7′ 5″	
			N	2′ 7″	2′ 6″	2′ 5″	2′ 4″	2′ 3″	2′ 2″	2′	1′ 9″	1′ 7″	1′ 4″
7″	10″	2′ 4″	F	2′ 5″	2′ 6″	2′ 7″	2′ 8″	2′ 9″	3′	3′ 5″	4′ 3″	6′ 1″	22′
			D	2″	3″	5″	7″	9″	1′ 1″	1′ 8″	2′ 8″	4′ 8″	21′
			N	2′ 3″	2′ 3″	2′ 2″	2′ 1″	2′	1′11″	1′ 9″	1′ 7″	1′ 5″	1′ 3″
6″	8″	2′	F	2′ 1″	2′ 1″	2′ 2″	2′ 3″	2′ 4″	2′ 6″	2′ 9″	3′ 3″	4′ 3″	8′ 7″
			D	2″	2″	4″	5″	7″	10″	1′ 2″	1′10″	2′11″	7′ 5″
			N	1′11″	1′11″	1′10″	1′10″	1′ 9″	1′ 8″	1′ 7″	1′ 5″	1′ 4″	1′ 2″
5″	7″	1′ 9″	F	1′10″	1′10″	1′10″	1′11″	2′	2′ 1″	2′ 3″	2′ 8″	3′ 3″	5′ 4″
			D	2″	2″	2″	4″	5″	7″	10″	1′ 4″	2′ 1″	4′ 3″
			N	1′ 8″	1′ 8″	1′ 8″	1′ 7″	1′ 7″	1′ 6″	1′ 5″	1′ 4″	1′ 2″	1′ 1″
4″	6″	1′ 6″	F	1′5.5″	1′ 7″	1′ 7″	1′ 7″	1′ 8″	1′ 9″	1′10″	2′ 1″	2′ 6″	3′ 6″
			D	1″	2″	2″	2″	4″	5″	7″	11″	1′ 5″	2′ 7″
			N	1′6.5″	1′ 5″	1′ 5″	1′ 5″	1′ 4″	1′ 4″	1′ 3″	1′ 2″	1′ 1″	11″

with 1-inch f/2.5 universal focus lens

Best Focus	f/number	f/2.5	f/2.8	f/4	f/5.6	f/8	f/11	f/16	f/22	f/32
33′	Near Dist.	17′	15′	12′	10′	7′ 9″	6′ 2″	4′ 5″	3′ 4″	2′ 4″

THE HYPERFOCAL DISTANCE is the minimum distance at which critical sharpness is obtained with a given diaphragm opening when the lens is focused at infinity. When a focusing lens is set at the hyperfocal distance, all objects at half the hyperfocal distance and beyond will be in focus. The table below shows the hyperfocal distances for lenses for 16mm cameras, expressed in feet and based upon a circle of confusion of 0.001″ diameter. When used with U.F.H. lenses (universal focus, hyperfocal distance), the following table gives the distance of best focus corresponding to the full aperture of the lens; objects more than half this distance away will be in focus for all f/settings.

Lens Focal Length	Hyperfocal Distance in Feet for Various Apertures f/1.4	f/1.5	f/1.9	f/2	f/2.5	f/2.7	f/3.5	f/4	f/5.6	f/8	f/11	f/16	f/22	f/32
0.5″*	14.9	13.9	11.0	10.4	8.3	7.7	6.0	5.2	3.7	2.6	1.9	1.3	1.0	0.6
0.7″	29.2	27.2	21.5	20.4	16.3	15.1	11.7	10.2	7.3	5.1	3.7	2.6	1.9	1.3
1″	59.5	55.6	43.9	41.7	33.3	30.9	23.8	20.8	14.9	10.4	7.6	5.2	3.8	2.6
1.5″	133.9	125.0	98.7	93.8	75.0	69.4	53.6	46.9	33.5	23.4	17.0	11.7	8.5	5.8
2″	238.1	222.2	175.4	166.7	133.3	123.5	95.2	83.3	59.5	41.7	30.3	20.8	15.2	10.4
3″	535.7	500.0	394.7	375.0	300.0	277.8	214.3	187.5	133.9	93.8	68.2	46.9	34.1	23.4
4″	952.4	888.9	701.8	666.7	533.3	493.8	381.0	333.3	238.1	166.7	121.2	83.3	60.6	41.7
6″	2142.9	2000.0	1579.0	1500.0	1200.0	1111.1	857.1	750.0	535.7	375.0	272.7	187.5	136.4	93.8

*1″ lens with Wide Angle Attachment